



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,008	12/20/2007	Aldo Vanetta	B&P-108US	7000
23122	7590	11/09/2009	EXAMINER	
RATNERPRESTIA			STORMER, RUSSELL D	
P.O. BOX 980			ART UNIT	PAPER NUMBER
VALLEY FORGE, PA 19482			3617	
MAIL DATE		DELIVERY MODE		
11/09/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,008	<b>Applicant(s)</b> VANETTA, ALDO
	<b>Examiner</b> Russell D. Stormer	<b>Art Unit</b> 3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 August 2009.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-32 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-32 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

***Specification***

The abstract of the disclosure is objected to because of the use of the legal term "said." Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, 20-30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ash in view of Maldini et al.

Ash (U.S. Patent 1833879; previously applied) discloses a balancing element for a tire and wheel assembly comprising a plurality of weights arranged around a wheel rim. A functional element or valve stem **B** is provided on the wheel rim and includes a weight device comprising a clip connection 27 and weights 28 as shown in figure 8.

The clip connection 27 fastens the weights and the valve stem in the bore.

With respect to claims 1 and 20, lines 71-79, and 80-86 of page 1 and 110-111 of page, at least, Ash describes the balancing element as counterbalancing the tire and/or the wheel, it is clear that Ash is concerned with counterbalancing the tire and wheel assembly, and that the tire would inherently have a predetermined magnitude of imbalance, and a predetermined target value in order to be balanced within a tolerance.

With respect to claims 4 and 23, the nuts 28 can be considered to be "hollow-core screws" as broadly recited in the claims.

While it is clear that Ash is concerned with balancing the tire and wheel combination, it appears that Ash does not take into account the imbalance of the tire by itself, before the tire is mounted on the wheel.

Maldini et al (US Patent 5271663; previously cited, newly applied) teaches a wheel and method of correcting the imbalance of a tire and wheel assembly in which a wheel with a preselected amount of imbalance has a tire mounted thereon such that the imbalance of the tire is positioned opposite the imbalance of the wheel. The wheel can be formed to have the heaviest portion in the area of the valve stem. The heaviest or lightest part of the wheel can be marked for identification. The tire is then mounted to the wheel such that the heaviest part of the tire is opposite the heaviest part of the wheel. This reduces the magnitude of imbalance of the wheel and tire assembly and eliminates or reduces the need to attach balance weights to the wheel.

From this teaching it would have been obvious to those of ordinary skill in the art to determine the imbalance of the tire to be mounted on the wheel of Ash, and then mount the tire such that the imbalance of the tire lies opposite the functional element or valve stem of the wheel to reduce the magnitude of imbalance of the wheel and tire assembly as set forth in the method of claim 1. This would eliminate or reduce the need to use extra balance weights and would therefore yield the predictable result of reducing the overall weight of the wheel and tire assembly.

With respect to claims 28-30, the area of the valve stem of Ash is adapted to or is capable of being attached to or accommodating a sensor element of a tire pressure monitoring system.

With respect to claim 32, the housing or clip connection can be considered to be a dummy sensor inasmuch as neither is capable of performing a sensing function.

Claims 9-11 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ash in view of Maldini et al.

Ash as modified by Maldini et al meets all of the limitations of claims 1-8, 20-30, and 32 as set forth above, and is further applied as follows:

The housing 28 of Ash is capable of receiving or functioning with a sensor and a tire pressure monitoring unit. Since it well-known to provide a wheel assembly with a tire pressure monitoring unit in order to check the tire pressure, or as part of a central tire inflation system, it would have been obvious to those of ordinary skill in the art to provide such a system for the wheel assembly of Ash in order to monitor the inflation of the tires. It is further well-known to attach such a system to the wheel in the area of the tire inflation valve, or on the valve stem, and Official Notice is given for this feature.

With respect to claim 13, the housing or clip connection can be considered to be a dummy sensor inasmuch as neither is capable of performing a sensing function.

With respect to claims 14-18, it is well-known that the balancing or counterbalancing of a tire and/or wheel is accomplished by selecting a predetermined value for the amount of acceptable imbalance magnitude of total imbalance, and that a

pre-selected imbalance may be selected within a range, such as zero, and that such a target value should be attained before the tire and wheel assembly is considered to be ready for use on a vehicle. Further, the magnitude of imbalance such as set forth in claims 16-18 is obvious as an engineering choice based on the intended use of the wheel, or the desired imbalance.

With respect to claim 19, to use the system of Ash in a wheel having a central hump and to locate the valve stem in the hump is well-known and would have been obvious to those of ordinary skill in the art such that the system could be used on different types of wheels.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimura et al in view of Pollard.

Shimura et al (U.S. Published Application 2002/0033051, previously applied) discloses a tire valve and tire monitoring system comprising a valve stem and an assembly having sensors, a transmitter, and battery, wherein the positioning of the assembly may be moved to adjust the center of gravity of the assembly to prevent an imbalanced condition of the system. Clips 15 may be used to secure the valve stem and monitoring system. Shimura et al does not locate or balance the monitoring system based on an imbalance of the tire and/or wheel.

Pollard (U.S. Patent 5303463; previously applied) teaches a tire valve stem and balance weight assembly which is used to counterbalance the imbalance of a tire and

wheel assembly. See for instance lines 42-51 of column 1, and 27-35 of column 3 of Pollard.

From this teaching it would have been obvious to provide the assembly of Shimura et al with weights attached to the valve stem in order to counterbalance any imbalance of the tire and/or wheel. This would yield the predictable result of providing a better-balanced tire and wheel assembly, and would produce a quieter and more comfortable ride in the vehicle.

#### ***Response to Arguments***

Applicant's arguments filed August 20, 2009 have been fully considered but they are not persuasive.

Applicant's arguments with respect to Ash are noted, and while Ash may not explicitly refer to a "predetermined wheel rim imbalance" it is well-known that virtually all vehicle wheels have an inherent and predetermined imbalance due to manufacturing inconsistencies or imperfections. It is also well-known that tires also have inherent predetermined imbalances for the same reasons.

Applicant's argument that Ash does not provide a wheel with a predetermined imbalance is believed to be incorrect inasmuch as Ash locates a balance weight on the valve stem and another weight on the rim opposite the valve stem. Note lines 86-98 of page 1 of Ash.

With respect to the arguments concerning Shimura et al, it is believed that Applicant's interpretation of what is being balanced is incorrect. Note that the abstract states that the position of a center of gravity is adjusted to cancel a rotation moment caused by a centrifugal force during the rotation of the pressure vessel (tire). A rotational moment caused by a functional element would cause an imbalance in the wheel and tire assembly.

To argue that Pollard is only concerned caused by the tire is also considered to be incorrect. Lines 42-51 describe how a valve stem having a weight which is substantially the same as the magnitude of the tire imbalance is positioned in the valve opening and the tire is mounted with its imbalance diametrically opposite the valve stem. The valve opening in the rim creates an imbalance in the rim, and the valve stem and its associated weight further the imbalance. This predetermined imbalance is adjusted to offset the imbalance of the tire.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

The amendments to claims 1 and 20 necessitated the use of the Maldini et al reference.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell D. Stormer whose telephone number is (571) 272-6687. The examiner can normally be reached on Monday through Friday, 9 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

\*\*\*

/Russell D. Stormer/  
Primary Examiner, Art Unit 3617